

Appendix 1. Community Benefits Definition by IRS, 2018

Row	Type of Community Benefits	IRS's inclusion criteria to include as a community benefit	IRS's exclusion criteria to include as a community benefit	In this study we defined as:
Part 1				
a.	Financial Assistance at cost (from Worksheet 1)	A charity care means free or discounted health services provided to" people who meet the hospital's financial assistance criteria and are unable to pay for the services.	"Financial assistance doesn't include: bad debt or uncollectible charges that the organization recorded as revenue but wrote off due to a patient's failure to pay, or the cost of providing such care to such patients; the difference between the cost of care provided under Medicaid or other means-tested government programs or under Medicare and the revenue derived therefrom; self-pay or prompt pay discounts; or contractual adjustments with any third-party payors".	Charity care/ Community benefit
b.	Unreimbursed Medicaid (UMD): "b. Medicaid (from Worksheet 3, column a)"	Medicaid means the United States health program for individuals and families with low incomes and resources.	-	Community benefit
c.	Unreimbursed Other Means-Tested (UOM): "c. Costs of other means-tested government programs (from Worksheet 3, column b)"	"A means-tested government program is a government health program for which eligibility depends on the recipient's income or asset level. Other means-tested government programs mean government-sponsored health programs where eligibility for benefits or coverage is determined by income or assets, e.g. State Children Health Insurance Program, other federal, state or local health care programs."		Community benefit
d.	Community Benefit Services (CBS): "e. Community health improvement services and community benefit operations (from Worksheet 4)"	<p>"A Community health improvement services, means activities or programs, subsidized by the health care organization, carried out or supported for the express purpose of improving community health. Such services don't generate inpatient or outpatient revenue, although there may be a nominal patient fee or sliding scale fee for these services".</p> <p>To be reported:</p> <ol style="list-style-type: none"> 1) community need for the activity or program must be established <p>"Community benefit operations" means activities associated with conducting community health needs assessments, community benefit program administration, and the organization's activities associated with fundraising or grant writing for community benefit programs.</p> <ol style="list-style-type: none"> 1) community benefit activities or programs also seek to achieve a community benefit objective, including improving access to health services, enhancing public health, advancing increased general knowledge, and relief of a government burden to improve health". 	"Activities or programs cannot be reported if they are provided primarily for marketing purposes or if they are more beneficial to the organization than to the community".	Community benefit
e.	Unreimbursed Education (UED): "f. Health professions education (from Worksheet 5)"	"A health professions education means educational programs that result in a degree, certificate, or training necessary to be licensed to practice as a health professional, as required by state law, or continuing education necessary to retain state license or certification by a board in the individual's health profession specialty".	"It doesn't include education or training programs available exclusively to the organization's employees and medical staff or scholarships provided to those individuals. However, it does include education programs if the primary purpose of such programs is to educate health professionals in the broader community. Costs for medical residents and interns can be included, even if they	Community benefit

Row	Type of Community Benefits	IRS's inclusion criteria to include as a community benefit	IRS's exclusion criteria to include as a community benefit	In this study we defined as:
			are considered "employees" for purposes of Form W-2, Wage and Tax Statement".	
f.	Health Services (Not Means-Tested) (SHS): "g. Subsidized health services (from Worksheet 6)"	<p>"A subsidized health service means clinical services provided despite a financial loss to the organization. In order to qualify as a subsidized health service, the organization must provide the service because it meets an identified community need. A service meets an identified community need if it is reasonable to conclude that if the organization no longer offered the service:</p> <ul style="list-style-type: none"> • The service would be unavailable in the community, • The community's capacity to provide the service would be below the community's need, or • The service would become the responsibility of government or another tax-exempt organization. <p>• Subsidized health services can include qualifying inpatient programs (for example, neonatal intensive care, addiction recovery, and inpatient psychiatric units) and outpatient programs (emergency and trauma services, satellite clinics designed to serve low-income communities, and home health programs)"</p>	"Subsidized health services generally exclude ancillary services that support inpatient and ambulatory programs such as anesthesiology, radiology, and laboratory departments".	Community benefit
g.	Unfunded Research (URS): "h. Research (from Worksheet 7)"	"A research means any study or investigation the goal of which is to generate increased generalizable knowledge made available to the public. The organization can include the cost of internally funded research it conducts, as well as the cost of research it conducts funded by a tax-exempt or government entity".	"The organization cannot include in Part I, line 7h, direct or indirect costs of research funded by an individual or an organization that isn't a tax-exempt or government entity".	Community benefit
h.	Community Benefit Contributions (CBC): "i. Cash and in-kind contributions for community benefit (from Worksheet 8)"	"A cash and in-kind contributions" means contributions made by the organization to health care organizations and other community groups restricted, in writing, to one or more of the community benefit activities described in the table in Part I, line 7 (and the related worksheets and instructions). "In-kind contributions" include the cost of staff hours donated by the organization to the community while on the organization's payroll, indirect cost of space donated to tax-exempt community groups (such as for meetings), and the financial value (generally measured at cost) of donated food, equipment and supplies".	"Don't report as cash or in-kind contributions any payments that the organization makes in exchange for a service, facility, or product, or that the organization makes primarily to obtain an economic or physical benefit".	Charity care/ Community benefit
Part 2				
	Part II. Community Building Activities	"Community building activities mean the costs of the organization's activities that it engaged in during the tax year to protect or improve the community's health or safety, and that aren't reportable in Part I of this schedule".	-	included
Part 3				
	Bad Debt, Medicare, & Collection Practices	"This section covers, (a) combined bad debt expense; (b) an estimate of how much bad debt expense, if any, reasonably could be attributable to persons who likely would qualify for financial assistance under the organization's financial assistance policy; and (c) a rationale for what portion of bad debt, if any, the organization believes is community benefit".	-	Not included
Source: 2018 Instructions for Schedule H (Form 990)				

Appendix 2. Hospital and Environmental Characteristics of Nonprofit Hospitals -2017

	2017 (N=1904)	
<i>Hospital Characteristics</i>	Mean	SD
<i>Hospital Beds (Beds/10)</i>	191.24	(215.77)
Church operated	0.17	(0.37)
Teaching Status	0.31	(0.46)
Percent of Medicare and Medicaid Patients		
% of Medicare	0.51	(0.19)
% of Medicaid	0.21	(0.15)
Special Care Hospital	0.07	(0.25)
Number of physicians with privileges/10	41.79	(50.51)
Contract Managed	0.07	(0.26)
System member	0.63	(0.48)
Obstetrics		
No obstetrics	0.42	(0.49)
Uncomplicated maternity and newborn cases	0.22	(0.42)
Uncomplicated and most complicated cases	0.21	(0.41)
Serious illnesses and abnormalities	0.14	(0.35)
Level of trauma center		
No trauma center	0.61	(0.49)
Regional resource	0.07	(0.25)
Community trauma center	0.11	(0.31)
Rural trauma hospital	0.13	(0.34)
Greater/Specific	0.08	(0.27)
Community provider	0.06	(0.24)
Rural Referral Center	0.05	(0.21)
Margin	0.04	(0.09)
Market and County Level		
<i>Hospital Herfindahl Index</i>		
Hospital HI<0.15	0.17	(0.38)
0.15<Hospital HI<=0.25	0.21	(0.41)
Hospital HI>0.25	0.62	(0.49)
County Has at Least One FQHC		
Medicaid Expansion States	0.74	(0.46)
<i>Population (Ref. % White NH)</i>		
% White NH	87.06	(14.61)
% Black NH	3.51	(8.36)
% Asian NH	0.76	(1.07)
% Hispanic	5.72	(9.09)
% Other	2.95	(5.48)
Poverty Ratio	12.75	(6.30)

Sources: IRS 990, Cost Report: 2017 and AHA: 2017

- 1) We computed margins by subtract expenses from revenue divided by revenue.
- 2) We calculated a hospital's market share as either its discharges – for independent hospitals - or the discharges of its system – for hospitals affiliated with a system divided by the total number of discharges in the hospital referral region (HRR) based on the Dartmouth grouping, using herfindahl index we defined three markets as: non-concentrated (if $0 < 0.15$), moderate concentrated (>0.15 and <0.25) and highly-concentrated (if >0.25).